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The role of CD26 and CD40 expression in therapeutic response - experimental study in oral cancer lines

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Oral cancer (OC) is one of the 10 most diagnosed cancers in the world. It is aggressive and difficult to treat. Despite the achieved therapeutic advances, the 5 year survival rate has not changed in the past decade. Understanding the basic molecular pathogenesis of OC may give new opportunities for future treatments. Regulators of the immune system such as CD40 [1]. and CD26 [2] are believed to be involved in carcinogenesis besides immunologic anti-tumour defence. The aim of this study was to evaluate the influence of CD26/DPPIV and CD40/CD40L cell expression in two OC cell lines and treatment response.

For this two human OC cell lines BICR10 (*in situ*) and HSC3 (metastatic) were incubated with cisplatin in different concentrations. Cell morphology was evaluated by light microscopy and cell viability was estimated by alamar blue test. Cell death CD26 and CD40/CD40L expression was evaluated by flow cytometry and DPPIV by luminescent assay.

Preliminary results show that BICR10 has higher CD26/DPPIV levels and lower CD40/CD40L expression than HSC3. However, after treatment with cisplatin expression of CD40/CD40L and DPPIV increases in both cell lines that could be related with apoptosis detected by morphology and cytometry.

Our results suggest that CD40/CD40L and CD26/DPPIV can be involved in OC development and drug response and could constitute a new molecular target to cancer diagnosis/prognosis and treatment.

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References
1. Vonderheide RH: **Prospect of targeting the CD40 pathway for cancer therapy.** *Clin Cancer Res* 2007, **13**:1083-1088.
2. Havre PA, Abe M, Urasali Y, Ohnuma K, Morimoto C, Dang NH: **The role of CD26/dipeptidil peptidase IV in cancer.** *Front Biosci* 2008, **13**:1634-1645.

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